POSTER SESSION

1214 Left Atrial Structural and Functional Abnormalities: Echocardiographic Insights

Tuesday, April 01, 2003, 3:00 p.m.-5:00 p.m.
McCormick Place, Hall A
Presentation Hour: 4:00 p.m.-5:00 p.m.

1214-33 Safety of Low Molecular Weight Heparin After Transesophageal Echocardiographic Guided Cardioversion as Bridging Therapy

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Background: In patients undergoing transesophageal echocardiographic (TEE) guided cardioversion for atrial fibrillation of unknown or > 48 hours duration, the safety of post-cardioversion subcutaneous (sq) low molecular weight heparin (LMWH), in lieu of intravenous unfractionated heparin, as bridging therapy until warfarin anticoagulation is therapeutic (INR 2-3) is unclear.

Methods: The Cardioversion Data Base from May 2000 through August 2002 was searched for patients dismissed home after successful TEE guided cardioversion on fixed doses of LMWH because of a sub-therapeutic INR. Patients were followed up through clinical record review to identify any bleeding or cardioembolic events while on LMWH.

Results: Eighty-one cases met our inclusion criteria and had complete follow up data (60 men, 21 women; mean age 67 years +/- 13; 11 patients > 79 years). Eleven patients (13%) had a serum creatinine > 1.5 mg/dL. Eighteen patients received Ardeparin (130 U/kg subcutaneously (sq) every twelve hours (q12h), 14 received Enoxaparin (1 mg/kg sq q12h) and 45 received Dalteparin (100 U/kg sq q12h). Forty-nine patients had maintained sinus rhythm at follow up (mean of 81 days). Bleeding complications occurred in 5 patients (6.2%), all of whom were greater than 79 years old, comprising 45% of all patients in this age group. Three were major bleeds (two gastrointestinal and one retroperitoneal) requiring hospitalization and blood transfusion. The INR was supra-therapeutic in one. Two were minor bleeds requiring no therapy. None had a serum creatinine > 1.5 mg/dL. No patient experienced stroke or other systemic embolism while using LMWH.

Conclusion: In this small cohort, no strokes or other systemic embolic events were observed in association with LMWH at doses used to treat acute deep venous thrombosis or pulmonary embolism. However, five bleeding complications were observed in patients > 79 years of age. More data are needed.

1214-34 Low Molecular Weight Heparin in Atrial Fibrillation Prior to Cardioversion: Short-Term Safety and Efficacy in a Transesophageal Echocardiography Prospective Study

Lydia Djaouti, Charles Smadja, Nadia Benyounes, Catherine Albo, Olivier Belliard, Franck Boccara, Ariel A. Cohen, Saint Antoine University, Paris, France

Conventional treatment using warfarin (W) in atrial fibrillation (AF) before cardioversion is associated with a decreased thromboembolic (TE) risk. Currently, no echocardiographic study has been performed to evaluate the frequency of transoesophageal (TEE) TE risk markers under chronic W. We aimed at comparing TE markers in AF of > 2 days under W or low molecular weight heparin treatment (LMWH).

Methods : Using transthoracic echocardiography and TEE, before cardioversion, we compared 68 consecutive patients (Pts) under chronic W therapy (at least 3 weeks and INR > 2) to 140 consecutive Pts treated with subcutaneous weight adjusted LMWH (dalteparin) for instantaneous anticoagulation prior to cardioversion. The following echo parameters were recorded : left (LAA) and right (RAA) atrial appendage areas, spontaneous echo contrast (SEC) and thrombus (Thr).

Results : No difference was observed in the 2 groups with regard to age (68 ± 12 and 70 ± 12 years, respectively), previous TE event (16 % and 9 %, respectively, p = 0.220) and cardiovascular risk factors. Valvular disease was more frequent in the W group (41.1 % and 18.5 %, respectively, p < 0.001). A comparison of the 2 groups is shown in the table.

	AF/Warfarin (n = 68)	AF/LMWH (n = 140)	p
In-hospital TE event	0	0	-
LAA area (cm²)	5.38 ± 2.43	5.93 ± 2.54	0.139
LA SEC (n, %)	39 (57.3)	85 (60.7)	0.754
RA SEC (n, %)	8 (11.7)	32 (22.8)	0.086
LAA thrombus (n, %)	2 (2.9)	6 (4.2)	0.929

Conclusion : No in-hospital TE event was observed. Embolic risk markers are present in chronic W group as well as in LMWF group. The presence of LAA Thr under W therapy suggests the need for TEE before cardioversion to exclude the presence of atrial thrombus in high risk Pts.

1214-35 Thromboembolic Risk Stratification Based on SPAF Clinical Criteria in Patients With Paroxysmal Atrial Fibrillation and Flutter: A Prospective Transesophageal Echocardiography Study

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It has been reported that patients (Pts) with paroxysmal atrial fibrillation and flutter (PAT) have a lower thromboembolic (TE) risk than those with permanent atrial fibrillation (AF). However, a recent longitudinal study suggested a similar annual rate of ischemic stroke in both populations. This apparent discrepancy could be explained by differences in the frequency of transesophageal echocardiography (TEE)-detected TE risk markers.

Objective : We sought to assess TE risk markers using TEE in Pts with PAT according to the SPAF clinical criteria for risk stratification.

Methods : As part of an ongoing study based on transthoracic and TEE in atrial arrhythmia, we prospectively studied 145 Pts within 48 hours of spontaneous cardioversion of any documented PAT (AF in 120 Pts, atrial flutter or tachycardia in 25 Pts). Pts were divided into high, moderate and low clinical risk groups. The following parameters were evaluated : left atrial (LA) and LA appendage (LAA) areas, spontaneous echo contrast (SEC), LAA end diastolic emptying velocity (Vel), LAA thrombus (Thr) and thoracic aorta atheroma (TAA).

Results : The main results are summarised in the table.

	High risk (n=66)	Moderate risk (n=34)	Low risk (n=45)	p
Mean age (years)	77.9 ± 9.9	63.6 ± 7.3	54.2 ± 15.3	<0.001
LA area (cm²;)	19.9 ± 5.6	19.3 ± 4	18.3 ± 5.5	0.937
LAA area (cm²;)	4.9 ± 2.3	4.4 ± 1.7	4.6 ± 1.9	0.987
LAA Vel ≤25 cm/s (n,%)	13 (20.6)	10 (29.4)	13 (30)	0.460
LA SEC (n,%)	22 (35)	5 (15.1)	5 (11.6)	0.007
LAA Thr (n,%)	2 (3)	0	1 (2.2)	0.599
TAA ≥ 4mm (n,%)	15 (22.7)	5 (14.7)	2 (4.4)	0.031

There was no difference in the 3 groups with regard to LA and LAA areas, Vel and Thr. LA SEC and TAA were significantly more frequent in high risk Pts using SPAF clinical criteria.

Conclusion : These results suggest the need for a similar risk stratification and anticoagulant regimen in high-risk patients with PAT and permanent AF.

1214-36 Recurrent Ischemic Cerebral Events in Patients With Different Subtypes of Arterial or Cardiac Source of Embolism: A Four and Five-Year Follow-Up Study

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Background This study was performed to assess the risk of recurrent ischemic events or death in stroke patients with different subtypes of arterial or cardiac source of embolism.

Methods All patients admitted to the Department of Neurological Sciences underwent general medical and neurological examination, chest radiography, general blood chemistry assay, CT scan, carotid ultrasound and transesophageal echocardiography. Patients discharged from the hospital have been followed-up for 5 years by clinical examination and telephone interview. In according to the modified criteria of Amarenco we divided patients in: Group I, those with a definite or possible arterial or cardiac source of embolism; Group II, with small-vessel disease; Group III, who could not be classified into either of the above groups. For the purpose of our study, Group I was further divided in patients with carotid artery disease, and definite, probable or possible source of embolism (SOE).

Results 228 patients, mean age 55±17, male 51%, were classified as follow: 152 (67%) in Group I, 60 (26%) in Group II and 16 (7%) in Group III. Overall recurrent stroke or death occurred in 34 (22%), 5 (8%) and 1 (6%) respectively in each group.

During the observation period in Group I (mean age 57±17, male 51%) the recurrent rates was 43% for patients with definite, 17% for patients with probable, 20% for patients with possible causes of source of embolism and 21% for those with carotid artery disease. In particular the highest recurrent rates of embolic events or death was observed in 12 out of 27 (44%) patients with complicated aortic plaques and 12 out of 62 (19%) with atrial septal abnormalities determining right-to-left shunt. **Conclusions:** Patients with complicated aorta plaques on transesophageal echocardiography study are at increased risk for recurrence stroke or death. It suggests that these patients need a more aggressive treatment as opposed to those affected by other causes of ischemic stroke.

1214-37 Predictors of Six-Month Sinus Rhythm Maintenance Following Successful Cardioversion of Atrial Fibrillation: An ACUTE Trial Ancillary Study

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Background: Clinical and transesophageal echocardiography (TEE) predictors of sinus rhythm (SR) maintenance following cardioversion of atrial fibrillation (AF) are poorly defined. The purpose of this study was to identify predictors of long-term SR maintenance following successful AF cardioversion.

Methods: The Assessment of Cardioversion Using Transesophageal Echocardiography (ACUTE) Trial, randomized 1,222 patients with AF to TEE-guided cardioversion or conventional treatment. Successful conversion to SR occurred in 327 of 425 (80%) patients